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ABSTRACT

Students and teachers need to develop skills in using available technological capacities. The curriculum described here is designed to familiarize students and teachers with equipment and software available at the Escuela Internacional Sampedrana's Primary School (EIS) in Honduras. Key features of the curriculum include the use of the Internet and e-mail; grade level developmental activities including word processing, typing, painting/drawing, and spreadsheet/database programs; teacher training suggestions; and an overview on web page construction. This document begins by describing EIS administration, educational philosophy, teachers, primary school academic program, and educational goals, as well as the history of the computer laboratory. It then presents a general overview of the computer curriculum objectives for grades 1 through 6 and student evaluation methods. For each grade level, specific learning objectives, instructional strategies, and evaluation methods are described. Sample lesson plans are also included. Contains 9 references. (KB)

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A DEVELOPMENTALLY APPROPRIATE HONDURAN/INTERNATIONAL PRIMARY SCHOOL COMPUTER CURRICULUM

by

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July 1997

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Special thanks go to **Mrs. Mari Rodezno**, high school computer teacher, for the basic curriculum outline; subsequent concepts germane to our Primary School grades were laid upon her initial work. **Mr. Enrique Hernandez**, the school's computer technician whose ideas expanded our imagination and whose trouble shooting helped to realize our goals sooner than later, is also deserving of many thanks. A final "thank you" goes to **Mrs. Jeanne Rice**, the Primary Principal who wrote the parent handbook from which information was adapted and placed within the background section on the Escuela Internacional Sampedrana in this report.

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INTRODUCTION

Students and teachers need to develop skills that enable them to confidently utilize available technological capacities. The curriculum described in this document is intended to familiarize students and teachers with the equipment and software available in the Escuela Internacional Sampedrana's (E.I.S.) Primary School so that teachers will be better able to employ technology as a tool for instruction and thereby enhance student learning. Our hope is that readers will find useful ideas which they may adapt to their particular settings.

The curriculum we developed offers a basic understanding of computer functions and eases the transition between current operating systems and new technology likely to be encountered in the future. This curriculum encourages students and teachers to use the capabilities of technology to stretch their creative and analytical thinking abilities. In addition, a criteria for success at all grade levels is presented within the curriculum.

THE CONTEXT

The Escuela Internacional Sampedrana (E.I.S.) in Honduras recently (1996-1997) entered cyberspace by joining the global web of linked networks and computers known as the Internet. Commitment to integrating widespread use of these new technologies among staff and students has been met with much excitement and high expectations on the part of administrators and teachers alike. Acquisition of these technologies was without a doubt the prime catalyst for review and revision of our Primary School computer curriculum, the details of which are presented below (see pp. 8-24).

Both immediate and long-term benefits for individuals and the school should result from access to the Internet and electronic mail ("email"). Individuals should instantly feel a part of the modern world communication system and learn valuable skills essential for current and future employment. Time delays in communication with Stateside friends and relatives (familiar to veterans of international education) are now technologically bridged. Diminished real time delays combined with reduced feelings of geographic isolation should serve to minimize culture shock for newcomers to international education. New teachers can now ask all conceivable questions in attempts to best prepare for the transition to another country/culture that awaits them. Furthermore, potentially prohibitive monetary costs to communicate with E.I.S. -- which prospective teachers currently bear -- will decrease as fewer stamps and envelopes are purchased, fewer faxes are sent, and fewer recruiting conferences are attended. Instead, use of email and computers with microphones and receiving speakers will enable discount mailings and international phone conversations (billed at local phone rates) to become commonplace. In short, as E.I.S. creates an attractive profile on its web page, we expect our recruitment costs in terms of time and money to

diminish and the professional development of our current teachers to increase as they reach outward into the "world community" of educators.

Under such conditions, teachers already employed by E.I.S. will also receive crucial assistance in maintaining professional contacts. Imagine it -- through the internet, one can: (a) remain current of educational trends by visiting professional association world wide web sites, (b) secure employment by posting one's resume on the "web" (or going a step further and creating a personal web page), (c) use email to continue work on advanced degrees, e.g., by forwarding dissertation chapters to committee members in U.S. universities, or (d) "chat" with professional colleagues at various subject specific "Listserv" addresses.

In our own local context, the Escuela Internacional Sampedrana also hopes to enhance communication among fellow member schools in the Association of Bilingual Schools of Honduras and the Association of American Schools of Central America to facilitate academic, athletic, and cultural activities. Teachers hope to help students "surf the 'net" and connect with potential pen pals and tour famous institutions outside our national borders. And administrators welcome the inherent power of networking with international schools of similar context and mission to problem solve and/or share school improvement success stories.

What follows is a description of our revised computer curriculum in response to the immense infusion of technology described above (internet and email). This curriculum particularly addresses student learning objectives to assist in their acquisition of new technological skills and transfer to novel settings. Key features of our new computer curriculum include:

- the use of the internet and email;
- grade level developmental activities;
- teacher training suggestions; and
- an overview for web page constructions.

ABOUT THE SCHOOL

Administration

E.I.S. is private bilingual educational institution owned by the parents of the students attending the school. The School Board is elected by the parents and establishes all policies by which the school is governed. To facilitate their function, the School Board appoints a Superintendent who is the administrative and educational leader of the school. An Official Director is recommended by the Superintendent and the School Board, and appointed by the Ministry of Education of Honduras. The Official Director aids and advises the Superintendent in the administrative duties of the school. The High School Principal is responsible for the overall

management of the secondary program and is directly responsible to the Superintendent. Likewise, the Primary School Principal is responsible for the overall management of the primary program and is directly responsible to the Superintendent.

All educational levels at E.I.S. (Preschool, Primary, and Secondary) are accredited and recognized by the Southern Association of Colleges and Schools in the United States, and by the Honduran Ministry of Education. This accreditation allows students to transfer -- without losing academic credits -- to or from other accredited institutions both within Honduras and the United States.

Educational Philosophy

In terms of its educational philosophy, E.I.S. is dedicated to developing fully bilingual leaders. These students will build the academic and social skills necessary to succeed in the university of their choice and the self-discipline and integrity to act upon their knowledge in their community, nation, and world.

Teachers

Qualified teachers, both foreign and national, make up the teaching staff of E.I.S. Each teacher holds a degree that qualifies him or her to teach in a specific area. The teaching staff consists of highly qualified, responsible, and professional people who emanate genuine concern for the needs of the students and the school.

Primary School Academic Program

The Primary School Program is composed of grades one through six with three sections of each. The basic classes offered are: literature, spelling, oral and written language arts, science, mathematics, Spanish, and social studies (in English and Spanish). Furthermore, the curriculum provides classes in: art, music, agriculture, computers, and physical education. Additionally, fifth and sixth graders receive orientation class designed to assist the students with study skills, values, and other various topics.

Primary School Educational Goals

The Primary School Program is dedicated to achieving the following five (5) educational goals:

1) To develop within students sound study habits, punctuality, and

discipline.

2) To promote a socialization strategy which encompasses: (a) integrity, (b) cooperation, (c) friendship, (d) respect, (e) sympathy, (f) understanding, (g) self-control, and (h) common justice.

3) To stimulate the building of student knowledge, beginning with concrete manipulation and building to abstract use of knowledge that can be applied to the student's world.

4) To offer a basic understanding of the necessary prerequisites for entry into the secondary educational grade levels.

5) To establish a solid English and Spanish language base so that the student can fully develop the necessary skills to confront the various situations they will encounter in the future at a university, professional setting, or social level.

History of the Computer Laboratory

The Escuela Internacional Sampedrana Board of Directors decided to establish a computer lab for teaching the basics of computing for the first through sixth grades. Previously, the computers had been in the classrooms for use at teachers discretion. Regretfully, these computers were not used to their fullest potential and in some cases were damaged from mishandling.

The lab arrangement is a great advantage for the school from a maintenance standpoint. Maintenance and repair becomes easier at a lesser cost. For example, the lab, unlike the classrooms, is air conditioned which prolongs the life of the computers. Also, a white board has been installed in the classroom to cut down on dust created by using a chalk board. Additionally, the computer teacher is constantly aware of the maintenance necessary on each individual machine, thus time elapsed for repairs is shortened. Therefore, the major challenge present is to integrate work completed within a computer class period with relevant topics from students' classroom instruction. Finally, in addition to maintaining a lab, the formation of the elementary computer lab is a step in improving teacher training and student understanding so that in the future computers can be present once again in classrooms to more effectively enrich learning experiences.

The following section provides a general description of the Primary School's computer curriculum and the method of evaluation. Subsequent sections describe in greater detail the computer curriculum for individual grades and provide sample lesson plans. A final section describes the faculty training that is offered to support new teachers of this curriculum and those requiring more computer expertise.

GENERAL OVERVIEW OF CURRICULUM OBJECTIVES

Grades 1-6

Each grade level attends one forty-minute computer class per week. The computer lab is also open at lunch and recess (Monday-Friday), and after school for one hour, one day a week to allow students to come in on a voluntary basis. Instruction is designed so that students obtain the knowledge to successfully utilize equipment in the school lab, and have a general understanding of computer functions and hardware so that their knowledge transfers to different operating systems from which their training was received. Opportunities available to teachers are also addressed to encourage teachers to integrate activities requiring technology into their teaching. Students should leave the Primary School with the perception that computers are tools enabling them to solve problems, and they should have the skills to make this knowledge reality.

Grade 1

The first grade computer classes are focused on learning how to manipulate the mouse to move through a windows-based system. Students will use educational software to increase their word recognition, improve their organizational skills, build manipulative skills, and practice mathematical problem solving. Use of this software will provide the opportunity to open and close the system properly. Students should also gain a basic awareness of things that can be done with the internet.

Grade 2

Second grade computer classes will continue to improve skills targeted by educational software and skills needed to open, move within, and close the system. Students will begin weekly keyboarding practice to prepare them to utilize word processing and other productivity software. Students should also have an awareness of the capabilities of the internet, and knowledge of how to use email.

Grade 3

Third grade classes will be introduced to word processing programs as well as drawing and painting programs. Each student will save and retrieve work from his/her own diskette. Students will also use email and gain familiarity with software to search the world wide web.

Grade 4

Fourth graders will continue to develop their word processing and drawing/painting techniques, and enhance their work with tools such as spell check and graphics libraries. Work will be saved and retrieved from their own diskette. Students will use email as a way to exchange

information and perform searches for information on the world wide web.

Grade 5

Fifth graders will continue to develop word processing skills, and be introduced to spreadsheet and database programs. The integration of these applications will be emphasized by cutting and pasting between applications. Work will be saved and retrieved from their own diskette. Students will use email as a way to exchange information, perform searches for information on the world wide web, and begin learning the basics of web page design.

Grade 6

Sixth grade instruction will be focused on using computers and their applications as a problem-solving tool. They will utilize their knowledge of the applications to accomplish various tasks. Students will use email as a way to exchange information, perform searches on the world wide web, and design their own web pages.

Programs in which specific instruction is given include:*Clarisworks 4.0, Super Munchers, Word Munchers, Language Explorer, Talking Number Maze, Spellbound, The Yukon Trail, Reader Rabbit 1, Mavis Beacon Teaches Typing, Launch Pad, The Print Shop Deluxe, Netscape Navigator*, and *Email Connection*.

METHOD OF EVALUATION

Each student receives a grade based on the following criteria.

- Students behave properly in the lab. Proper behavior includes:

  (a) walking into the computer lab
  (b) carefully being seated at a computer
  (c) talking quietly

- Students follow oral and written directions given by the teacher.

- Students handle the equipment appropriately.

- Students work well individually or with partners.

- Students obey lab rules such as:

  (1) Share -- taking turns is an important part of teamwork.
  (2) Quiet -- listening insures that you know what to do next.
  (3) Take care of your computer -- no food or drinks allowed.

- Students complete assignments in a timely matter and include criteria specified for the

particular assignment.

The following section, Content Objectives, provides details for each grade concerning: (a) specific learning objectives, (b) instructional strategies, and (c) methods of evaluation.

CONTENT OBJECTIVES
FIRST GRADE

General Purpose

To introduce the students to components of a computer system, allow manipulation of the equipment, and to encourage independent thought processes and reasoning.

Specific Objectives

By the completion of grade one, the student will:

1. develop awareness that a computer is a machine that will obey commands
2. demonstrate how to use a mouse to manipulate the screen icons
3. explore applications of computers in their own lives
4. witness differences between input and output devices of computer
5. name each of the main components of a computer system: monitor, CPU, keyboard, mouse, and printer
6. select and quit software
7. create a product using software and the printer
8. describe things that can be accomplished with the internet (send a message, find information, etc.)
9. participate in an email exchange

Method

To reinforce the objectives the teacher will:

1. allow students freedom in choosing games to play, and provide them with skills needed to access games on the computer system
2. work individually with the students to verify their abilities to manipulate the mouse, and monitor hand-eye coordination
3. coordinate games and projects with topics relevant to their classwork and events in their own lives
4. create a drawing using the mouse and Clarisworks painting program (input) and print the drawing or view it on the monitor (output)

5. review components of the computer and later require students to point to parts and name them
6. orally instruct and manually demonstrate correct method of selecting and exiting software; students will practice the procedure each week
7. assist with the creation and printing of drawings
8. facilitate a discussion and demonstration, if possible, of sending email and finding material on the world wide web
9. assist students in exchanging information with one or more email pen pals

Evaluation

Students will be graded on a satisfactory or unsatisfactory basis. Completion of 70% of the skills will result in a satisfactory grade, below 70% is unsatisfactory. There should be no difficulty in receiving a grade of satisfactory at the first grade level. Practical skills checks will be administered twice each bimester to verify development.

CONTENT OBJECTIVES
SECOND GRADE

General Purpose

Continue work with the components of a computer system, specifically learning symbols on the keyboard and functions of the keyboard. Students will be introduced briefly to word processing.

Specific Objectives

By the completion of grade two, the student will:

1. utilize commands to accomplish specific tasks
2. demonstrate how to use the keyboard and mouse to manipulate screen icons and software
3. explore applications of computers in their own lives
4. witness the difference between input and output devices of a computer
5. name the main components of a computer system: monitor, CPU, keyboard, mouse, and printer
6. move about in system
7. create a product using software and printer
8. obtain familiarity with the layout of the keyboard and identify functions of letter and numeral keys, space bar, return, delete, caps lock, and shift keys.
9. describe things that can be accomplished with the internet (send a message, find information, etc.)
10. compose and send messages using email

Method

To reinforce the objectives the teacher will:

1. demonstrate how to change options in software based on individual preferences (sound, text size, etc.)
2. work with students to verify abilities to manipulate the mouse; instruct them on how to use the keyboard to "sign in" with certain software

3. coordinate games and projects with topics relevant in their classwork and surrounding world
4. allow students to create drawings and word processing documents using the mouse and keyboard (input); print work or view it on the monitor (output)
5. review components of the computer, then require students to point to parts and name them
6. demonstrate opening and closing procedures, and allow for opportunities to switch between software applications
7. assist with creation and printing of word processing documents
8. complete weekly lessons in the *Mavis Beacon Teaches Typing* program
9. facilitate a discussion and demonstration, if possible, of sending email and finding material on the world wide web
10. assist students in exchanging information with one or more email pen pals

Evaluation

Students will be graded upon their abilities to complete the above requirements. Completion of 70% or better will result in a satisfactory grade, below 70% is unsatisfactory. Practical skills checks will be given twice each bimester to verify development. At least two word processing documents should be completed. These will be evaluated on formatting objectives identified in class.

CONTENT OBJECTIVES
THIRD GRADE

General Purpose

To reinforce students' knowledge of the components of a computer system, allow manipulation of the equipment, and to encourage independent thought processes and reasoning. Students will be introduced the use of diskettes, and store and retrieve information from their own personal diskette. Students will also complete assignments using the word processing, drawing, and painting programs.

Specific Objectives

By the completion of grade three, the student will:

1. execute computer commands
2. use the mouse and keyboard to manipulate icons and perform procedures
3. explore applications of computers in their own lives
4. use input and output devices of computer to accomplish tasks
5. name and describe a function of each of the main components of a computer system: monitor, CPU, keyboard, mouse, and printer
6. navigate through the hierarchical organization of software and locate software/documents stored in various places
7. produce typewritten documents using the ClarisWorks 4.0 word processing program
8. design drawings and pictures using the ClarisWorks 4.0 painting/drawing programs
9. witness memory capabilities of computer systems by storing information on diskettes
10. compose and send messages using email
11. use browser to locate sites on the world wide web

Method

To reinforce the objectives, the teacher will:

1. demonstrate using software to accomplish specific tasks (changing type to boldface, shading particular area of a drawing, etc.)
2. present and review options listed in the menu bar and allow ample opportunity for students to

become familiar with basic options

3. coordinate projects that allow students to solve problems in their surrounding world with technology
4. allow students to create documents and print them
5. discuss and allow students to explore the functions of computer components
6. assign work that is to be stored on and retrieved from diskettes.
7. provide topics so that students may produce paragraphs and stories in the word processing program
8. assist and supervise drawing and painting assignments
9. supervise formatting, storing, and retrieving information from diskettes
10. assist students in exchanging information with one or more email pen pals
11. familiarize students with functions of the browser and provide URLs of sites

Evaluation

Students will have the first bimester to familiarize themselves with procedures necessary to work with diskettes, and will receive a grade on a satisfactory or unsatisfactory basis. Completion of 70% of the skills will result in a satisfactory grade, below 70% is unsatisfactory. In following bimesters students will be graded on the same "A", "B", "C", or "no pass" grading scale used in other classes. Grades will based on the assignments that they complete in class.

Several word processing and drawing/painting assignments will be completed. These will be evaluated on formatting objectives covered in class. Editing (proofreading and spell checking) and elaboration (use of underlining, boldface, shading, colors, etc.) will be graded as well. Work will be graded from a hard copy or diskette. The student's grade will also be based on participation in class.

CONTENT OBJECTIVES
FOURTH GRADE

General Purpose

To reinforce students' knowledge of the components of a computer system, allow manipulation of the equipment, and encourage independent thought processes and reasoning. Students will continue their work with word processing, and drawing and painting programs, and also be introduced to cutting and pasting within different programs of the ClarisWorks package.

Specific Objectives

1. formulate and execute computer commands
2. use mouse and keyboard to manipulate icons and perform procedures
3. problem-solve using the computer as a tool
4. select software necessary to complete assignments
5. identify appropriate equipment to accomplish certain tasks
6. navigate through the hierarchical organization of a computer system
7. locate software/documents stored in various places
8. produce typewritten documents using the Clarisworks 4.0 word processing program
9. design drawings and pictures using the Clarisworks 4.0 drawing and painting programs
10. cut and paste a drawing onto a word processing document
11. compose and send messages using email
12. use the browser to locate sites on the world wide web
13. conduct searches using various search engines

Method

To reinforce the objectives the teacher will:

1. demonstrate and encourage the use of shifting to accomplish specific tasks
2. present and review options listed in menu bar and allow ample opportunity for students to become familiar with basic options
3. demonstrate the spell check, thesaurus, and other problem-solving tools included in software

4. introduce and discuss functions of word processing, painting, drawing, and Print shop software.

5. explain and demonstrate functions of mouse, keyboard, CPU, monitor, printer, CD-rom drive, and modem

6. provide opportunities to work from the hard drive and create new folders

7. assist students in locating documents on the hard drive and on individual diskettes

8. provide topics to enable students to compose paragraphs and short stories using Clarisworks 4.0 word processing

9. assist and supervise drawing and painting assignments

10. direct students through procedures for cutting and pasting

11. assist students in exchanging information with one or more email pen pals.

12. familiarize students with functions of the browser

13. demonstrate processes of using search engines and coordinate searches with topics relevant in the classroom

Evaluation

Students will be graded on the same "A", "B", "C", or "no pass" grading scale used in other classes. Grades will based on the assignments that they complete in class.

Several word processing and drawing/painting assignments will be completed. These will be evaluated on formatting objectives covered in class. Editing (proofreading and spell checking), elaboration (use of underlining, boldface, shading, colors, etc.), and application of computer tools (thesaurus and dictionary) will be graded as well. Work will be graded from a hard copy or diskette. The student's grade will also be based on participation in class.

CONTENT OBJECTIVES
FIFTH GRADE

General Purpose

To reinforce students' knowledge of the components of a computer system, allow manipulation of the equipment, and encourage independent thought processes and reasoning. Students will continue their work with word processing, and drawing and painting programs, and be introduced to spreadsheet and database programs. Their practical knowledge of how to use a computer will form the basis for discussions on how computers work. Knowledge of how computers work will enable them to successfully transfer their skills to other software and operating systems that they will encounter.

Specific Objectives

By the completion of grade five, the student will:

1. formulate and execute computer commands
2. use input devices, output devices, and be able to distinguish between the two
3. problem-solve using the computer as a tool
4. determine which software is necessary to complete assignments
5. navigate through the hierarchical organization of a computer system
6. format diskettes
7. locate software/documents stored in various places
8. produce typewritten documents using the Clarisworks 4.0 word processing program
9. design drawings and pictures using the Clarisworks 4.0 drawing and painting programs
10. design and produce a database and spreadsheet
11. cut and paste within the integrated the ClarisWorks package
12. transfer information from one diskette to another
13. compose and send messages using email
14. use the browser to locate sites and conduct searches on the world wide web
15. observe procedures for designing web pages

Method

To reinforce the objectives the teacher will:

1. assist students in performing tasks with the computer necessary to complete their assignments
2. discuss functions of the monitor, CPU, keyboard, mouse, printer, CD-rom, and modem
3. demonstrate the spell check, thesaurus, and other problem-solving tools provided by various software
4. assist with the selection software necessary to complete assignments
5. provide opportunities to work from the hard drive and create new folders
6. facilitate formatting procedures and discuss reasons why formatting is necessary
7. assist students in locating documents on the hard drive and on diskettes
8. provide topics to enable students to compose paragraphs and short stories using the Clarisworks 4.0 word processing
9. assist and supervise drawing and painting assignments
10. develop a step-by-step process for formulating a database and spreadsheet. Assist students with the design of an original database and spreadsheet in class
11. demonstrate the processes of cutting and pasting within and between ClarisWorks documents
12. demonstrate procedures for copying information from one disk to another
13. assist students in exchanging information using email
14. familiarize students with functions of the browser and location/function of various search engines
15. demonstrate process of web page design

Evaluation

Students will be graded on the same "A", "B", "C", or "no pass" grading scale used in other classes. Grades will based on the assignments that they complete in class.

Several word processing and drawing/painting assignments will be completed. These will be evaluated on formatting objectives covered in class. Editing (proofreading and spell checking), elaboration (use of underlining, boldface, shading, colors, etc.), and application of computer tools

(thesaurus and dictionary) will be graded. Students will also design and utilize a spreadsheet and database. Students will be observed while creating the spreadsheets/databases, and graded on their knowledge of the functions of the software used to create them. The final product will also be graded from a hard copy or diskette. The student's grade will also be based on participation in class.

CONTENT OBJECTIVES
SIXTH GRADE

General Purpose

To reinforce students' knowledge of the components of a computer system, allow manipulation of the equipment, and encourage independent thought processes and reasoning, Students will continue their work with word processing, drawing and painting programs, and design projects using spreadsheet and database programs. Use of the computer to complete projects assigned in other classes will be encouraged. Instruction will be provided on "trouble shooting" as problems arise with their individual computers. Their practical knowledge of how to use a computer will form the basis for discussions on how computers work. Knowledge of how computers work will enable them to successfully transfer their skills to other software and operating systems that they will encounter. Students will be prepared for a successful experience using the PC lab in the Secondary School of E.I.S.

Specific Objectives

By the completion of grade six, the student will:

1. formulate and execute computer commands
2. use input devices, output devices, and be able to distinguish between the two
3. problem-solve using the computer as a tool
4. determine software necessary to complete assignments
5. navigate through the hierarchical organization of a computer system
6. format diskettes and explain why formatting is necessary
7. locate software/documents stored in various places
8. produce typewritten documents using the Clarisworks 4.0 word processing program
9. design drawings and pictures using the Clarisworks 4.0 drawing and painting programs
10. design and produce databases and spreadsheets
11. use integrated functions of computer applications
12. transfer information from one diskette to another
13. solve simple problems which occur with printing, diskettes, etc.
14. distinguish the neccesity of the "Save" or "Save As" command

15. compose and send messages using email
16. familiarize students with functions of the browser and location/function of various search engines
17. design web pages

Method

To reinforce the objectives the teacher will:

1. assist students in performing tasks with computer necessary to complete their assignments
2. discuss functions of the monitor, CPU, keyboard, mouse, printer, CD-rom, and modem
3. demonstrate the spell check, thesaurus, and other problem-solving tools provided by various software
4. assist with the selection of software necessary to complete assignments
5. provide opportunities to work from the hard drive and create new folders
6. facilitate formatting procedures and discuss reasons formatting is necessary
7. assist students in locating documents on the hard drive and on diskettes
8. provide topics to enable students to compose paragraphs and short stories using the Clarisworks 4.0 word processing
9. assist and supervise drawing and painting assignments
10. develop a step-by-step process for formulating a database and spreadsheet, and assist students with the design of an original database and spreadsheet in class
11. demonstrate the processes of cutting and pasting within and between ClarisWorks documents
12. demonstrate procedures for copying information from one disk to another
13. facilitate the correction of minor problems as they occur with the computers
14. provide opportunities to create new documents from old ones
15. assist students in exchanging information over email
16. demonstrate the use of the browser to locate sites and conduct searches on the world wide web
17. present procedures for designing web pages and assist students in the creation of a web page

Evaluation

Students will be graded on the same "A", "B", "C", or "no pass" grading scale used in other classes. Grades will based on the assignments that they complete in class.

Several word processing and drawing/painting assignments will be completed. These will be evaluated on formatting objectives covered in class. Editing (proofreading and spell checking), elaboration (use of underlining, boldface, shading, colors, etc.), and application of computer tools (thesaurus and dictionary) will be graded. Students will also design and utilize a spreadsheet and database. Students will be observed while creating the spreadsheets/databases, and graded on their knowledge of the functions of the software used to create them. Students will be observed to monitor their troubleshooting skills and their knowledge of using the software. Final products will be graded from a hard copy or diskette. The student's grade will also be based on participation in class.

SAMPLE LESSON PLANS

Lesson plans are created to fulfill specific objectives provided in the curriculum, and to meet the following general objectives:

- to demonstrate the effectiveness of a computer as a tool adaptable to many tasks
- to provide students with skills needed to confidently use a computer
- to encourage creative and analytical thinking
- to maximize hands-on computer time

The following lesson plans have multiple grade levels designated. Specific requirements can be changed to address the grade level with which the plan is used.

Lost In A Computer (grades 3-6)

Topics Addressed: Computer components, language arts, word processing, saving/retrieving

Objectives:
- synthesize location/function of computer components
- utilize word processing program and style tools
- store/retrieve information on diskette
- compose and edit creative story

Procedure: Create a story about being lost inside a computer. Story must include a description of the CPU, disk drive, monitor, mouse and what happens when you are inside of them. The words of computer components should be displayed in a style of your choice (bold, italics,etc.).

Population Studies -- Assisting Santa With Technology (grades 4-6)

Topics Addressed: World population increase, reading graphs, drawing program,

Objectives:
- Compare world population figures for past 1000 years
- Deduce that Santa's job delivering toys continues to become much harder
- Design blueprint of new mode of transportation for Santa using drawing program

Procedure: Students view graph showing the past 1000 years of world population. Look up fastest speed of a reindeer in almanac.Discuss ramifications of these two facts for Santa Claus. Use drawing program to make blueprint of a new transportation method for Santa or to improve upon one that he already uses.

Introduction To The Mouse -- Self-Portrait (grades 1-2)

Topics Addressed: Mouse manipulation, hand-eye coordination, introduction to painting

Objectives:
- Locate and launch painting program
- Use pencil and coloring tools to create self-portrait

- Use print command to print portrait
- Practice dragging and clicking using mouse

Procedure Students will discuss the definitions of the words *self* and *portrait* to determine what a self-portrait is. Pointing and clicking with the mouse will be explained as the students access the appropriate software. Drawing the portrait will allow students to practice using the mouse and to improve their hand-eye coordination.

Spreadsheets For Profit (grades 5-6)

Topics Addressed: Definitions of profit, income, and expenses, functions of a spreadsheet, entering formulas into a spreadsheet, and determining what formulas are necessary.

Objectives:
- define income, expenses, and profit
- fill information from a restaurant of the student's creation into spreadsheet
- determine what mathematical functions need to be used to carry out computations
- enter formulas and determine restaurant's profit

Procedure: Students will use prices off of a previously created "menu". Sources of income and expenses in running a restaurant will be discussed. Students will go over the definition of profit and how it is determined. Students will enter foods and prices from their menu on to their spreadsheet, and project how many of each item they will sell per month. Monthly income will be determined by multiplying cost by items/sold per month, and adding the totals. Expenses, which have been determined by class discussion, will be added. Profit will be figured by subtracting expenses from income. The spreadsheets will be saved to disk and printed.

Print Shop Product (grades 4-6)

Topics Addressed: Creation of a product, social studies (Egypt), Print Shop Deluxe Software

Objectives:
- create product that ancient Egyptians would have used
- design flyer marketing product
- utilize Printshop software

Procedure: Students discuss products which might have appealed to the ancient Egyptians (coordinates with social studies unit in class). Flyers advertising particular products are provided as examples and their characteristics discussed(headlines, text, and pictures). Students design and print a flyer using PrintShop Deluxe to advertise their product.

Letter Writing -- "Save" Vs. "Save As" Commands (grades 3-6)

Topics Addressed: Save vs. Save As command, word processing, format for letter writing

Objectives:
- distinguish necessity of using *save* or *save as* command
- draft a letter requesting that something be sent

- word process letter in proper style for a letter
- create multiple copies of letter from one

Procedure: Students will use a book such as Free Stuff for Kids to determine three things that they wish to request. Proper format of a letter will be discussed and posted for reference. Students will type the first letter using the word processor and save it. They will then make the necessary changes asking for the other product, and save this letter using the *save as* . The procedure will be repeated for the third letter. All three separate letters will be printed from the disk and sent to the appropriate places.

Internet Scavenger Hunt (grades 4-6)

Topics Addressed: Internet browsers, URLs, viewing web pages

Objectives:
- identify URLs and their functions
- locate place to enter URL in browser
- view web pages and answer questions concerning them

Procedure: Students will look at various magazines for URLs and discuss what distinguishes them and what they are for. A demonstration will be done on where to enter a URL in order for the browser to locate it. Students will follow a teacher-created guide using various URLs and established links to navigate web pages and answer questions about them

WEB PAGE CONSTRUCTION

In conjunction with gaining internet access, the school has developed an informational web page (http://www.netsys.hn/~seis). The webmaster sought details about the school from the primary and secondary principals as well as the Rector. Presently, the web page functions to deliver information about the school to the internet community, and to recruit new teachers and students. Once internet access is more available throughout the school, the web page will also serve as a medium for presenting student work. Joining the population of other international and public schools also online will hopefully foster communication between schools so that students can further understand their role in the global community.

As the web page was developed, more benefits became apparent to the webmaster. The Netscape editor, used to construct the pages, functions similarly to the ClarisWorks Drawing program with a pictorial menu that students in the primary are accustomed to using. Teaching students to create pages of their own would be a manageable transition from the drawing program, and an excellent preparation in anticipation of an internet connection in the primary lab. The Netscape Navigator browser can be installed on the computers prior to their connection to the internet, and students can create pages, view other student's pages, and complete teacher-created tutorials on the local drive. Experience creating the web page also allowed for experience with the FTP and telnet functions of the internet, which are sometimes overlooked in the excitement about email and the world wide web.

The EIS web page is the beginning of a successful start at joining the group of online educators. The unique part about being on line is that the benefits spread beyond that of the individual school, students, and teachers to other communities of educators and the online world.

FACULTY TRAINING AND SUPPORT

Insuring that the school's faculty is computer literate will result in students better prepared to use technology . Modeling an environment where the use of technology to accomplish tasks and solve problems is evident will attest to the benefits of learning to use a computer. At E.I.S., teachers have the opportunity to learn about software and how it can be applied to their teaching. Mini-courses are given on the internet so that teachers will gain competency to incorporate its use into their teaching. Awareness of the computer facilities and available software will allow teachers to better coordinate with the computer teacher the creation of assignments which, likewise, utilize the computer resources available to students.

Learning Opportunities Provided To Teachers

1. Classes on using word processing, spreadsheets, gradebook, Print Shop, and other available software offered during teacher orientation
2. Internet instruction on using email and the world wide web available throughout the year
3. Computer facilities available in library and teachers lounge
4. Opportunity to use computer lab during class's lab time
5. Computer lab open after school, during lunch and recess, and during off class periods for teacher use
6. Faculty surveyed in order to plan new workshops which answer their questions about computer use
7. Open lab period available to groups of students at teacher discretion to use the computer facilities to complete classroom projects

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